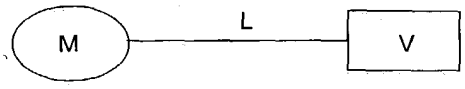
CLAIMS

1. A compound of the formula **I**:



I

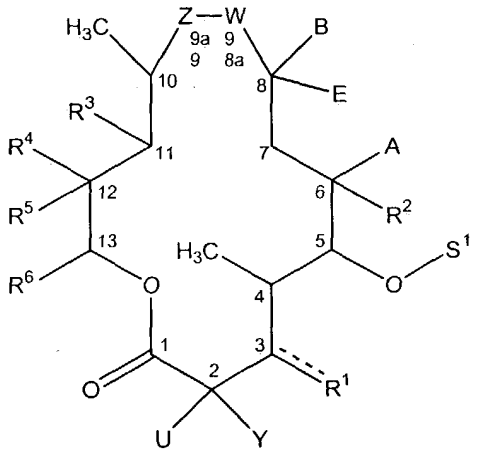
wherein

M represents a macrolide subunit possessing the property of accumulation in inflammatory cells;

V is anti-inflammatory steroid subunit or non-steroidal anti-inflammatory subunit , or an antineoplastic subunit or antiviral subunit; and

L is a linker molecule to which each of **M** and **V** are covalently linked; and pharmaceutically acceptable salts and solvates thereof and individual diastereoisomers thereof.

2. A compound according to claim 1 wherein **M** represents a group of Formula **II**:



II

wherein:

(i) Z and W independently are: >C=O, >CH_2, >CH-NR_tR_s, >N-R_N or >C=N-R_M or a bond wherein:

R_t and R_s independently are hydrogen or alkyl;

R_M is hydroxy, alkoxy, substituted alkoxy or OR^p;

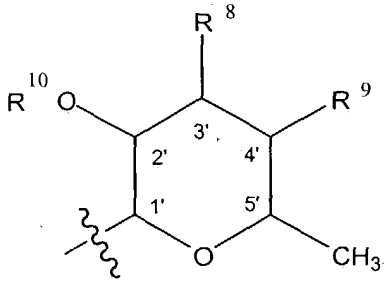
R_N is hydrogen, R^p, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, or -C(X)-NR_tR_s; wherein X is =O or =S;

provided that Z and W cannot both simultaneously be, >C=O, >CH_2, >CH-NR_tR_s, >N-R_N or >C=N-R_M or a bond,

(ii) U and Y independently are hydrogen, halogen, alkyl, or hydroxyalkyl;

(iii) R^1 is hydroxy, OR^p, -O-S^2 group or an =O;

(iv) S^1 is a sugar moiety of formula:



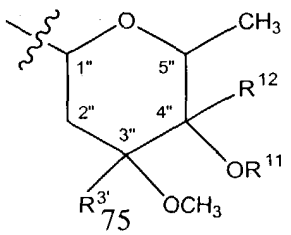
wherein

R^8 and R^9 are both hydrogen or together form a bond, or R^9 is hydrogen and R^8 is -N(CH_3)R^y, wherein

R^y is R^p, R^z or -C(O)R^z wherein R^z is hydrogen or alkyl or alkenyl or alkynyl or cycloalkyl or aryl or heteroaryl or alkyl substituted with C_2-C_7-alkyl, C_2-C_7-alkenyl, C_2-C_7-alkynyl, aryl or heteroaryl

R^{10} is hydrogen or R^p;

(v) S^2 is a sugar moiety of formula :



wherein:

$R^{3'}$ is hydrogen or methyl;

R^{11} is hydrogen, R^p or O-R^{11} is a group that with R^{12} and with C/4" carbon atom forms a >C=O or epoxy group;

R^{12} is hydrogen or a group that with O-R^{11} group and with C/4" carbon atom forms a >C=O or epoxy group;

(vi) R^2 is hydrogen, hydroxy, OR^p or alkoxy

(vii) A is hydrogen or methyl;

(viii) B is methyl or epoxy;

(ix) E is hydrogen or halogen;

(x) R^3 is hydroxy, OR^p, alkoxy or R^3 is a group that with R^5 and with C/11 and C/12 carbon atoms forms a cyclic carbonate or carbamate; or if W or Z is >N-R_N R^3 is a group that with W or Z forms a cyclic carbamate;

(xi) R^4 is C_1-C_4 alkyl;

(xii) R^5 is hydrogen, hydroxy, OR^p, C_1-C_4-alkoxy, or a group that with R^3 and with C/11 and C/12 carbon atoms forms a cyclic carbonate or carbamate;

(xiii) R^6 is hydrogen or C_1-C_4-alkyl;

wherein **M** has a linkage site through which it is linked to **V** *via* linking group **L**; provided that the linkage site being at one or more of the following:

a) any reactive hydroxy, nitrogen, or epoxy group located on S^1, S^2, or an aglycone oxygen if S^1 or/and S^2 is cleaved off;

b) a reactive >N-R_N or -NR_tR_s or =O group located on Z or W;

c) a reactive hydroxy group located at any one of R^1, R^2, R^3, and R^5;

d) any other group that can be first derivatized to a hydroxy or -NR_tR_s group and

R^p is hydroxyl or amino protective group

3. A compound as claimed in claim 1 wherein **L** represents member of the group of Formula **IV**:

$$X^1\text{-}(CH_2)_m\text{-}Q\text{-}(CH_2)_n\text{-}X^2$$

IV

wherein

X^1 is selected from: $-CH_2-$, -C(O)-, OC(O)-, N-O-, -OC(O)NH-or -C(O)NH-;

X^2 is -NH- or -NHC(O)-, -OC(O)-, -C(O)-, -O or $-CH_2-$;

Q is -NH- or $-CH_2-$, or absent;

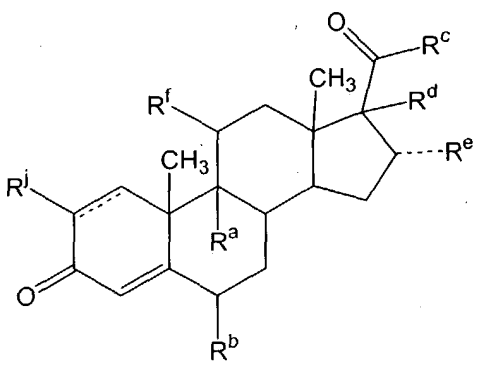
wherein each $-CH_2-$ or –NH- group may be optionally substituted by C_1-C_7-alkyl, C_2-C_7-alkenyl, C_2-C_7-alkynyl, $C(O)R^x$, $C(O)OR^x$, $C(O)NHR^x$ wherein R^x may be C_1-C_7-alkyl, aryl or heteroaryl;

the symbols m and n independently are a whole number from 0 to 4, with the proviso that if Q is NH, n cannot be 0,

and V is exclusively an antineoplastic subunit or antiviral subunit.

4. A compound according to claim 1 wherein **L** represents a peptide linker, comprising a polypeptide of between about two and about 50 amino acids.

5. A compound as claimed in claim 1 wherein **V** represents a member of the group of Formula X:



X

wherein

R^a and R^b independently represents, hydrogen or halogen;

R^c is hydroxy, alkoxy, alkyl, thiocarbamoyl, carbamoyl or a valence-bond;

R^d and R^e independently represents: hydrogen, hydroxy, methyl or C_1-C_4-alkoxy or each are a group that forms a 1,3-dioxolane ring with the other or a valence bond;

R^f is hydrogen, hydroxy, chloro, or forming a keto group with the carbon atom it is attached to;

R^j is hydrogen or halogen.

6. A compound according to claim 1 wherein **V** is derived from the NSAIDs selected from: aceclofenac, acemetacin, acetaminophen, acetaminosalol, acetyl-salicylic acid, acetyl-salicylic-2-amino-4-picoline-acid, 5-aminoacetylsalicylic acid, alclofenac, aminoprofen, amfenac, ampyrone, ampiroxicam, anileridine, bendazac, benoxaprofen, bermoprofen, α-bisabolol, bromfenac, 5-bromosalicylic acid acetate, bromosaligenin, bucloxic acid, butibufen, carprofen, celexocib, chromoglycate, cinmetacin, clindanac, clopirac, sodium diclofenac, diflunisal, ditazol, droxicam, enfenamic acid, etodolac, etofenamate, felbinac, fenbufen, fenclozic acid, fendosal, fenoprofen, fentiazac, fepradinol, flufenac, flufenamic acid, flunixin, flunoxaprofen, flurbiprofen, glutametacin, glycol salicylate, ibufenac, ibuprofen, ibuproxam, indomethacin, indoprofen, isofezolac, isoxepac, isoxicam, ketoprofen, ketorolac, lornoxicam, loxoprofen, meclofenamic acid, mefenamic acid, meloxicam, mesalamine, metiazinic acid, mofezolac, montelukast, nabumetone, naproxen, niflumic acid, nimesulide, olsalazine, oxaceprol, oxaprozin, oxyphenbutazone, paracetamol, parsalmide, perisoxal, phenyl-acethyl-salicylate, phenylbutazone, phenylsalicylate, pyrazolac, piroxicam, pirprofen, pranoprofen, protizinic acid, reserveratol, salacetamide, salicylamide, salicylamide-O-acetyl acid, salicylsulphuric acid, salicin, salicylamide, salsalate, sulindac, suprofen, suxibutazone, tamoxifen, tenoxicam, tiaprofenic acid, tiaramide, ticlopridine, tinoridine, tolfenamic acid, tolmetin, tropesin, xenbucin, ximoprofen, zaltoprofen, zomepirac, tomoxiprol, zafirlukast and cyclosporine.

7. A compound according to claim 1 wherein **V** is derived from the antineoplastic compounds selecting from bicaluatnide, camptothecin, estramustine phosphate, flutamide, mechlorethamine, thiotepa, ifosfamide, hydroxyurea, bleomycin, paclitaxel, lomustine, irinotecan, methotrexate, vinorelbine, anastrazole, floxuridine, melphalan, vincristine, vinblastine, mitomycin, nandrolone, goserelin, leuprolide, triptorelin, aminoglucthetemide, mitotane, cisplatine, chlorambucil, pentostatin, cladribine, busulfan, etoposide, mitoxantrone, idarubicin, cyclophosphamide, mercaptopurine, thioguanine, cytarbine, cyclophosphamide, doxorubicin, daunoribicin, teniposide tamoxifen, taxotere and topotecan.

8. A compound according to claim 1 wherein **V** is derived from the anti-viral compounds selecting from aciclovir, famciclovir, ganciclovir, cidofovir, lamivudine, ritonavir, indinavir, nevirapine, zidovudine, didanosine, stavudine, abacavir, zalcitabine, amprenavir, ribavirin and adamantane.

9. A compound according to claim 2 wherein Z and W together are: -$N(CH_3)$- CH_2-, -NH-CH_2-, -CH_2-NH-, -C(O)-NH- or –NH-C(O)-;
A and B are methyl;
E is hydrogen;
R^2 is hydroxy or methoxy;
S^1 represents desosamine sugar wherein R^8 is selected from: hydrogen, methyl, amino, C_1-C_6 alkylamino or C_1-C_6 dialkylamino;
R^9 and R^{10} are hydrogen;
R^1 is hydroxy or the O-S^2 group wherein the S^2 represents a cladinose sugar wherein:
R^{11} is hydrogen, or O-R^{11} is a group that with R^{12} and with C/4" carbon atom forms a >C=O or epoxy group; R^{12} is hydrogen or a group that with O-R^{11} and with C/4" carbon atom forms a >C=O or epoxy group;
R^{13} is methyl;
U is hydrogen;
Y is methyl;
R_6 is hydroxy, methyl or ethyl;

R^5 is hydrogen, hydroxy, methoxy or a group that with R^3 and with C/11 and C/12 carbon atoms forms a cyclic carbonate or carbamate bridge;

R^3 is hydroxy or a group that forms a cyclic carbamate bridge with W or Z, or R^3 is a group that with R^5 and with C/11 and C/12 carbon atoms forms a cyclic carbonate or carbamate bridge;

R^4 is methyl;

provided that the linkage is through the nitrogen of Z at N/9a position or through the carbon of R^{12} or through the oxygen of R^{11} both at C/4"position of the S^2 sugar.

10. A compound according to claim 3 wherein

X^1 is $-CH_2-$ or -OC(O)-;

X^2 is -NHC(O)-;

Q is -NH- or absent.

11. A compound according to claim 6 wherein:

V is derived from a NSAID selecting from: S-(+) - ibuprofen, indomethacin, flurbiprofen, naproxen, ketoprofen, acetyl salicylic acid, sulindac, etodolac, ketorolac, suprofen, flunixin, diclofenac sodium and tolmetin sodium.

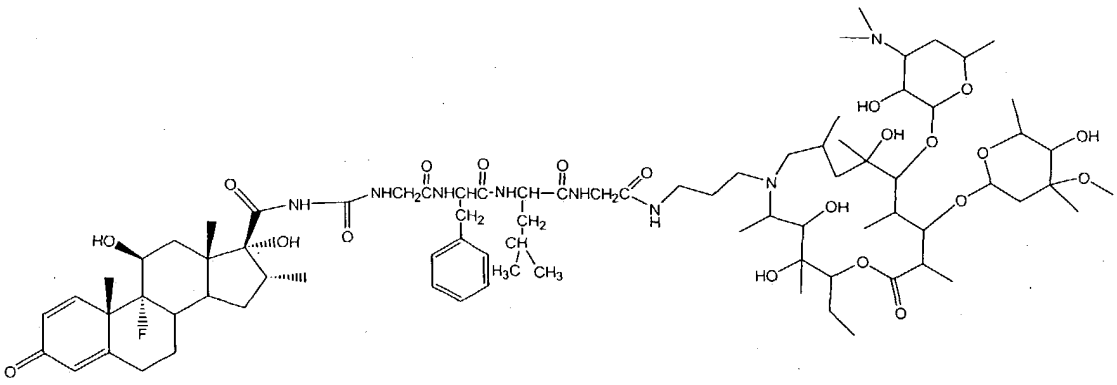
12. A compound according to claim 7 wherein:

V is derived from an antineoplastic compounds selecting from: methotrexate, paclitaxel, camptothecin and doxorubicin.

13. A compound according to claim 8 wherein

V is derived from the anti-viral compounds selected from: the group consising of: zidovudine, didanosine and stavudine.

14. A compound of the Formula:



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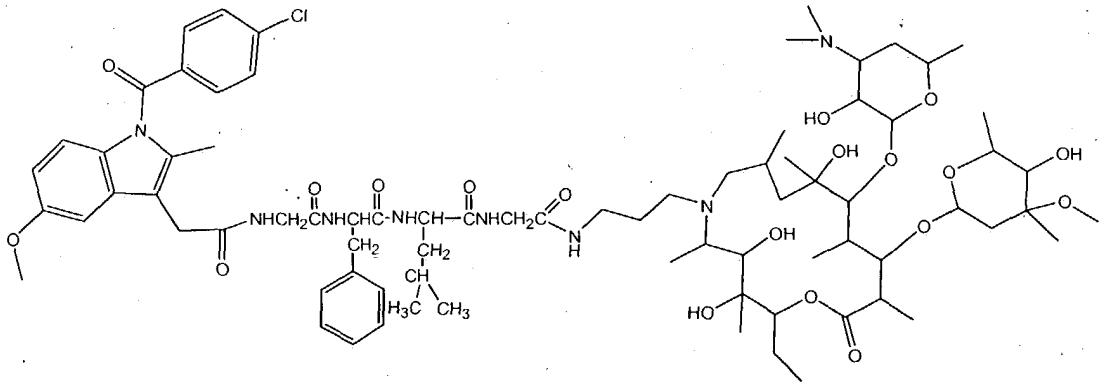
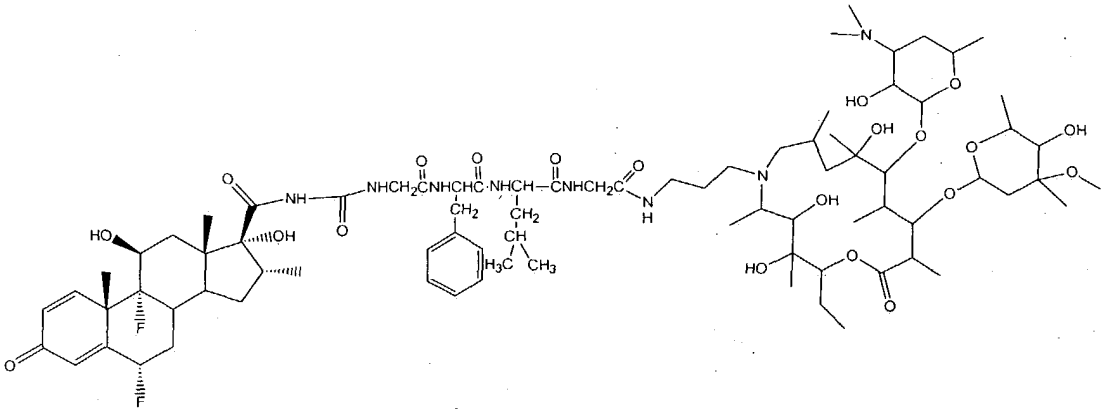
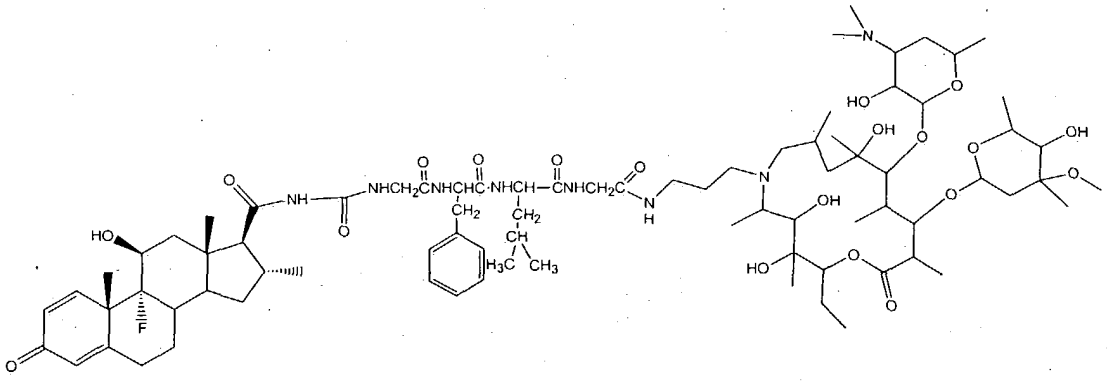


16. A compound of the Formula:



17. A compound of the Formula:



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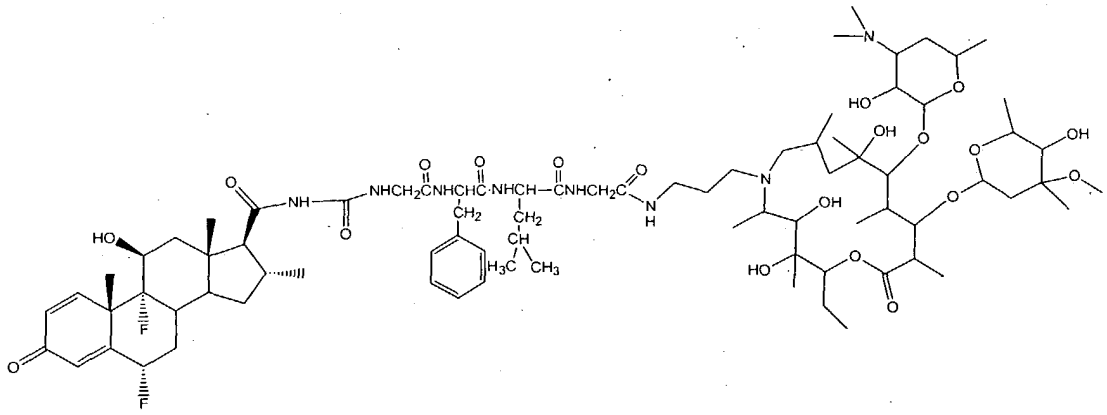

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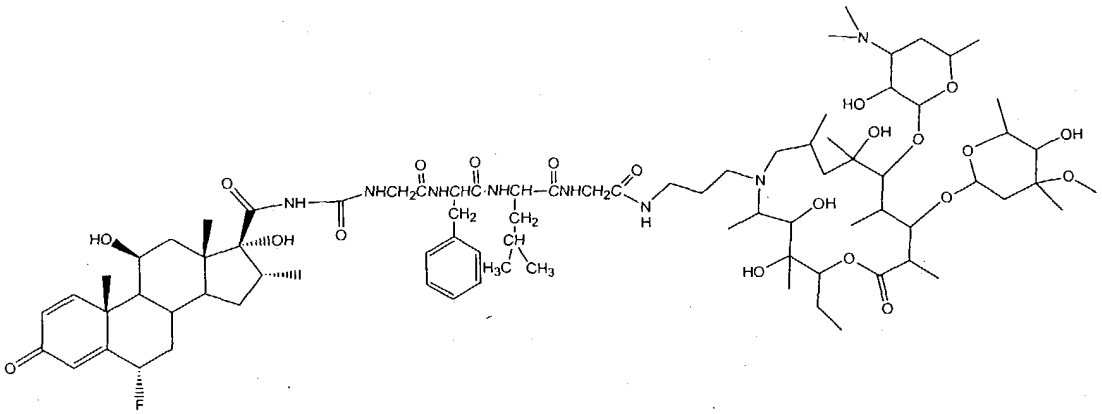

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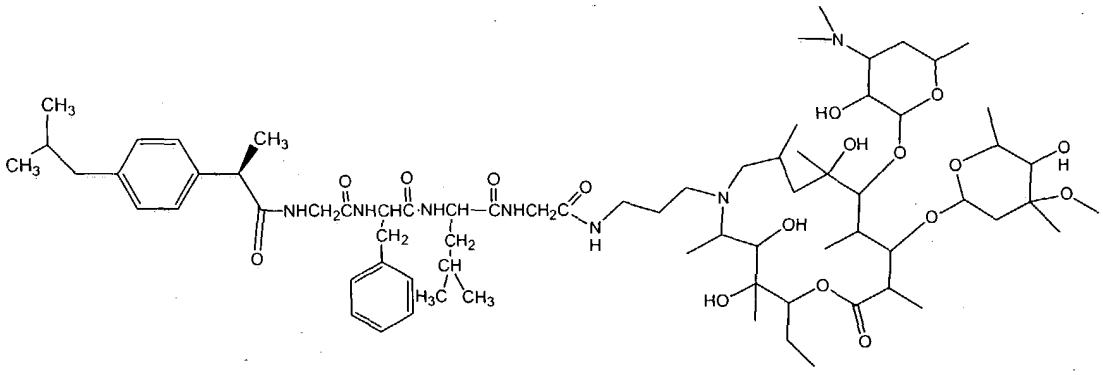

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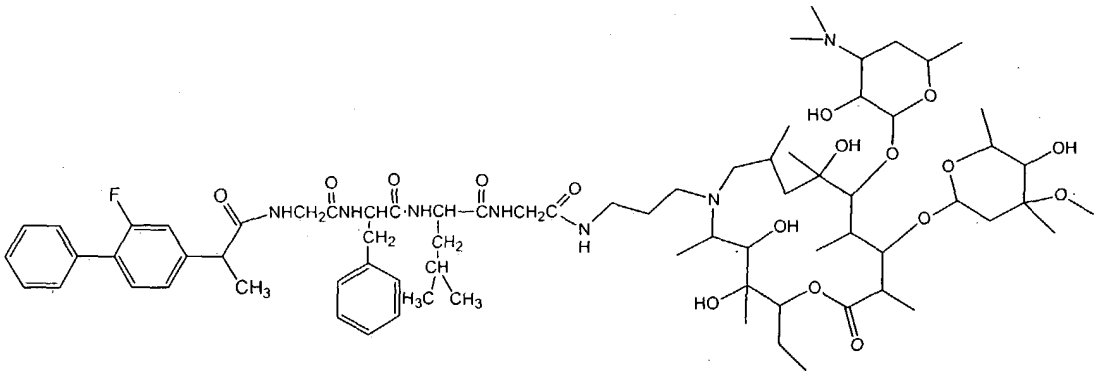

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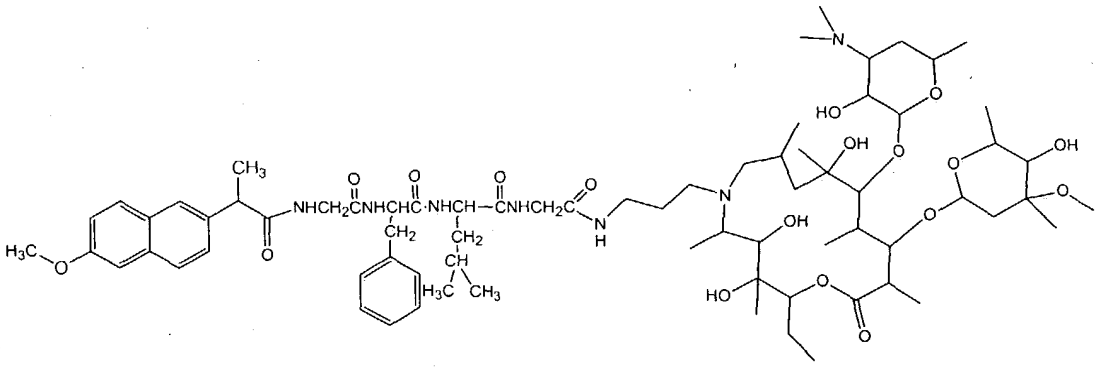

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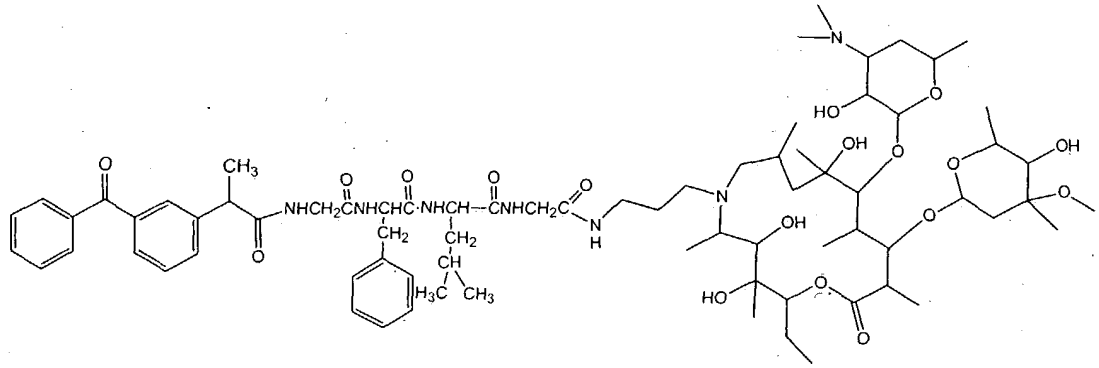

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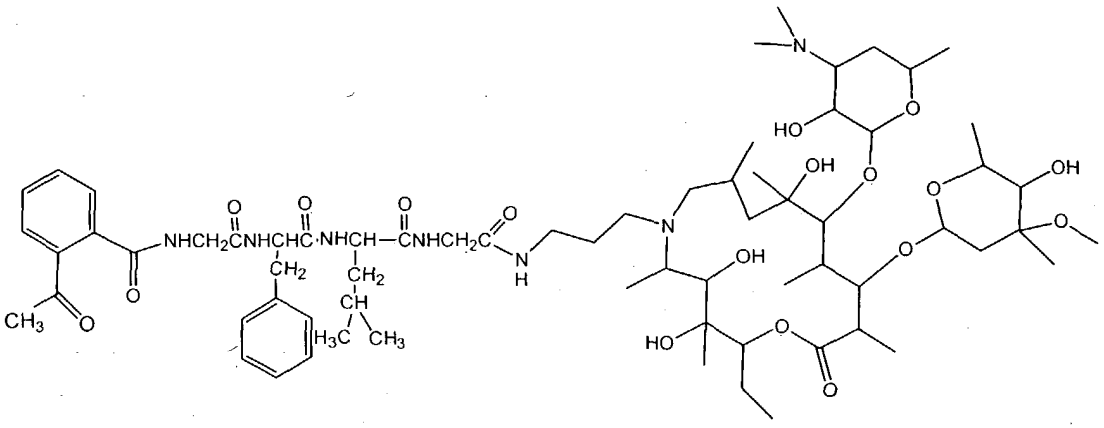

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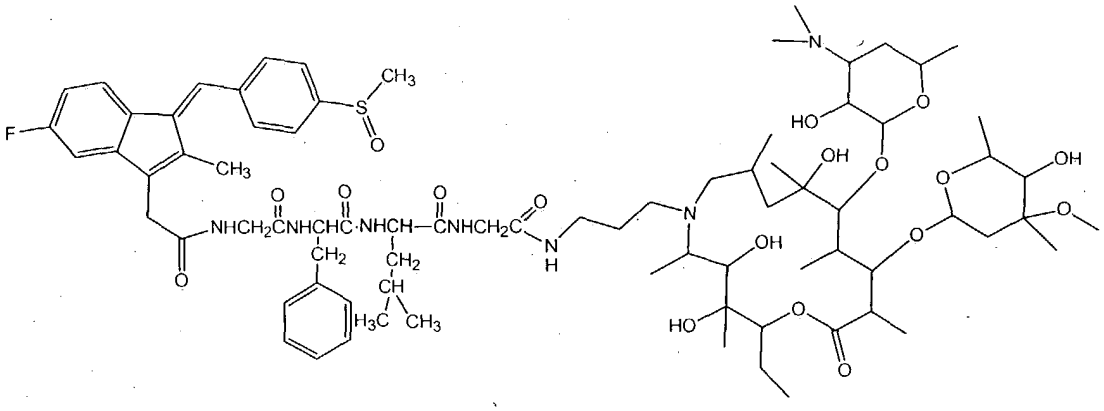

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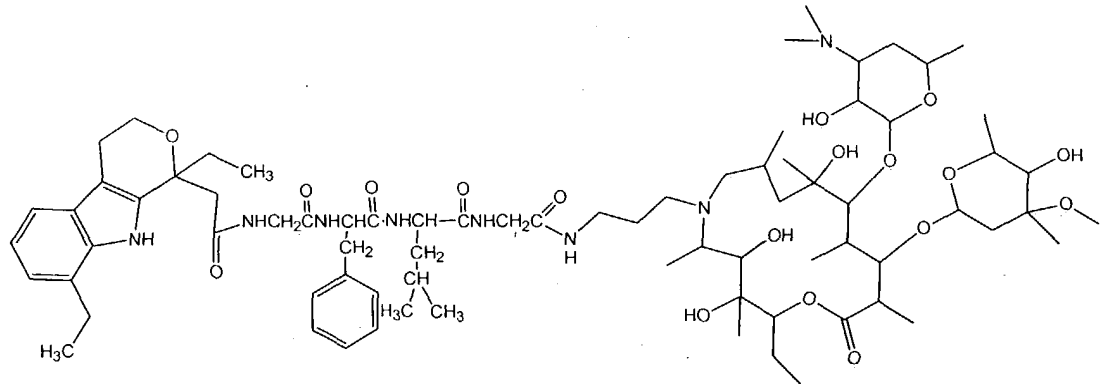

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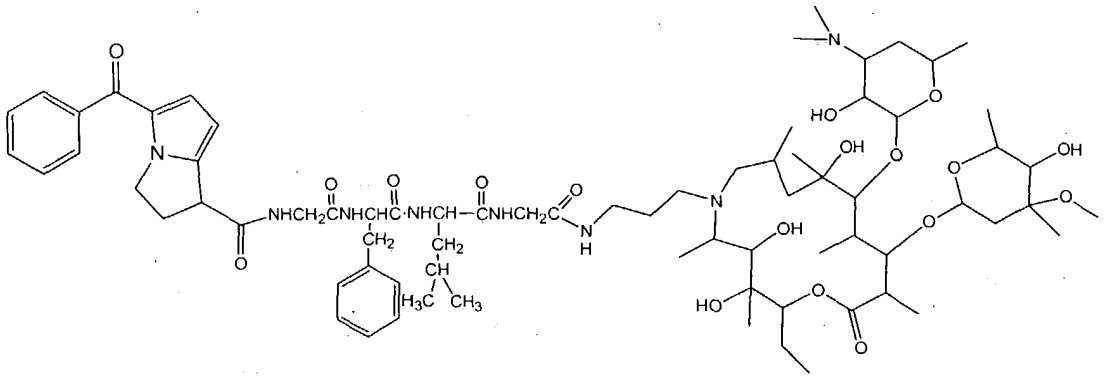

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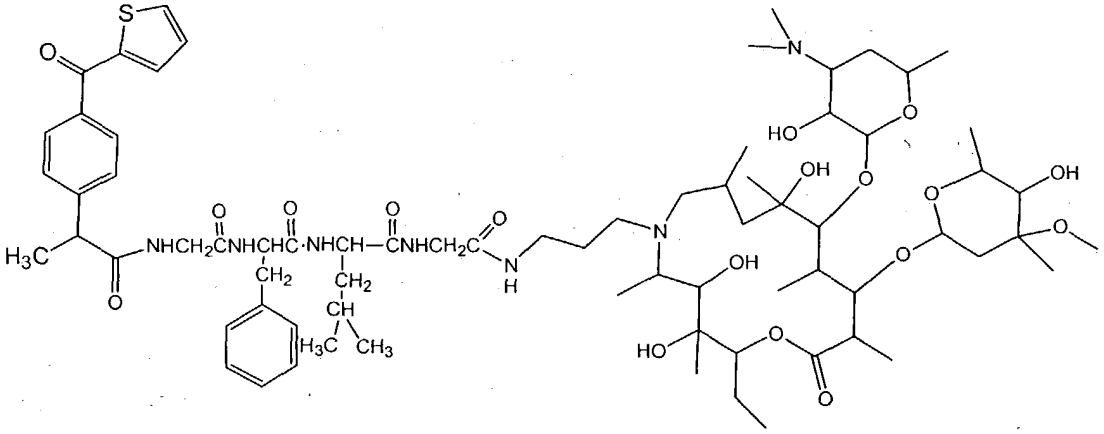

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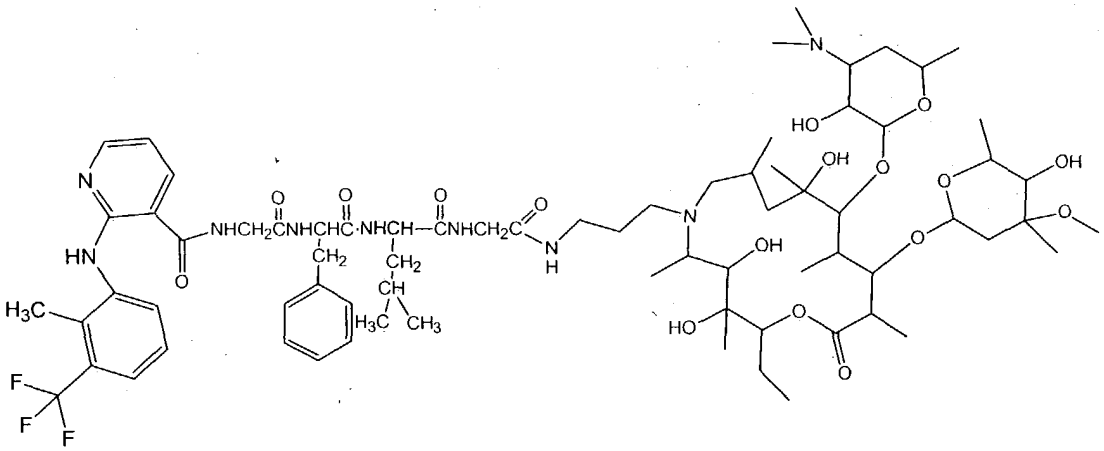
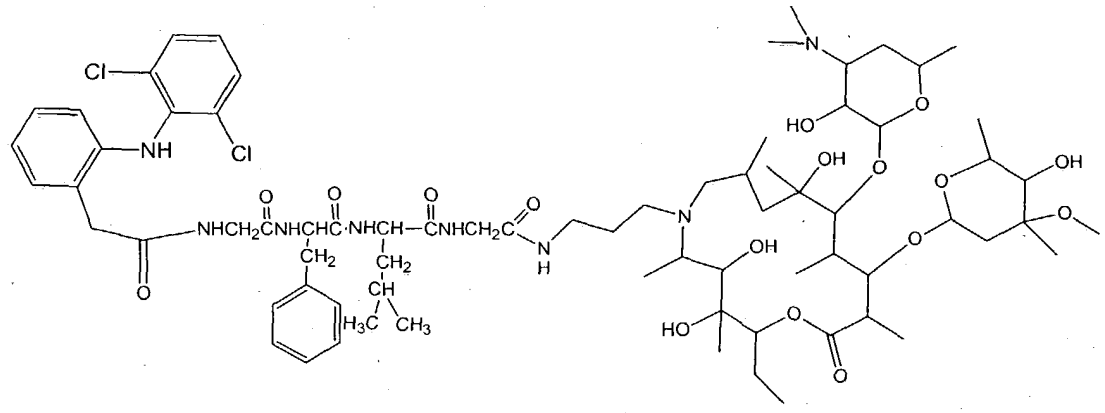


30. A compound of the Formula:



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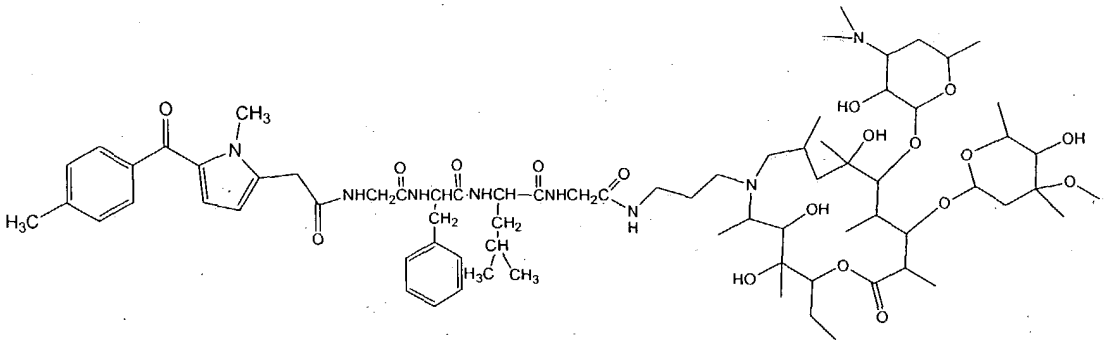

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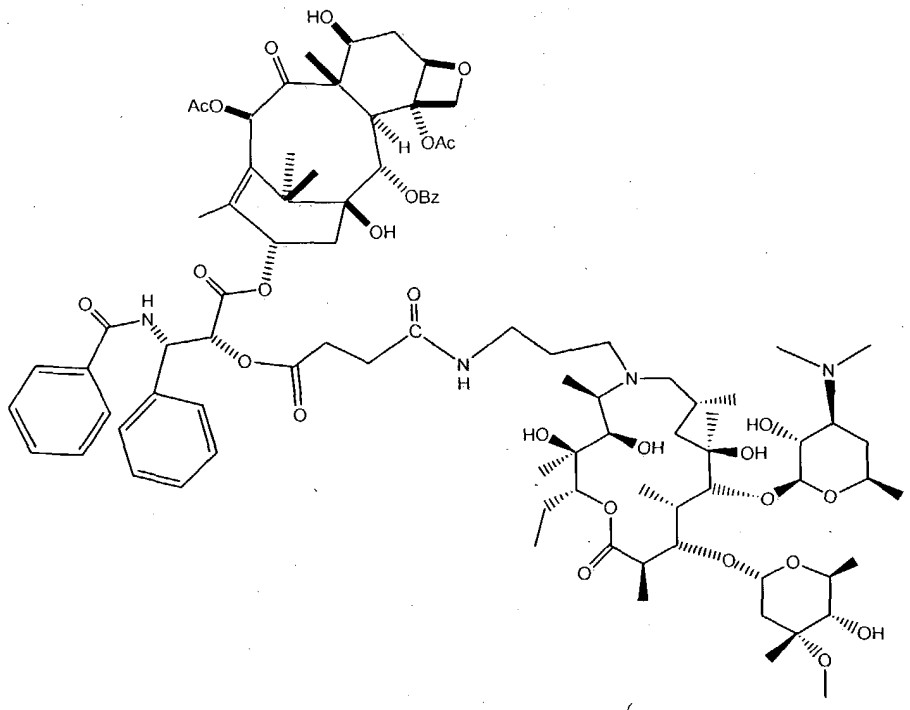

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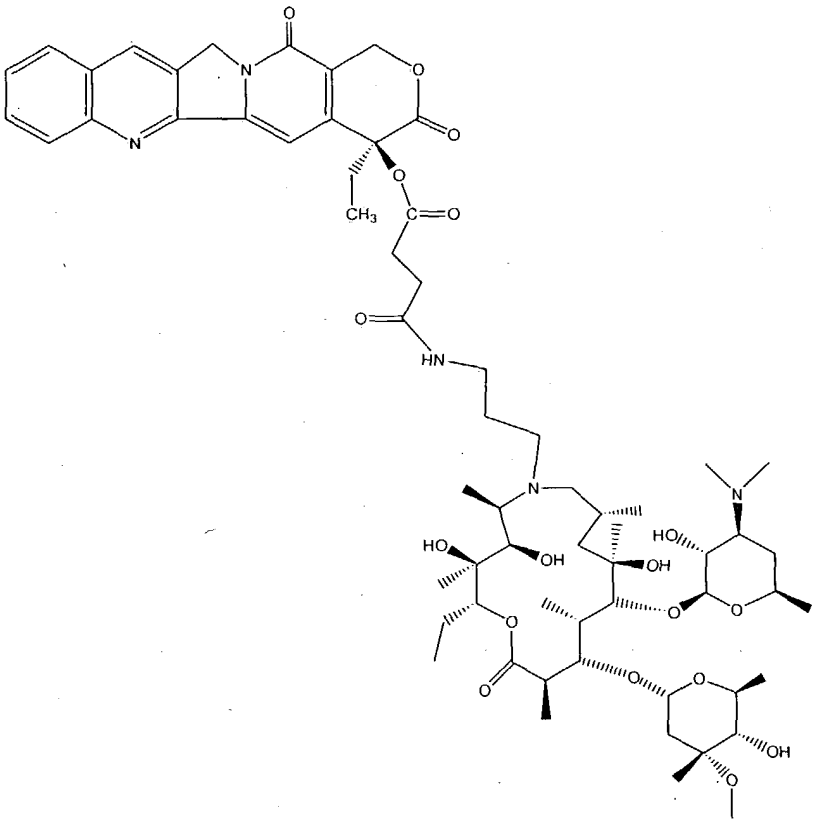

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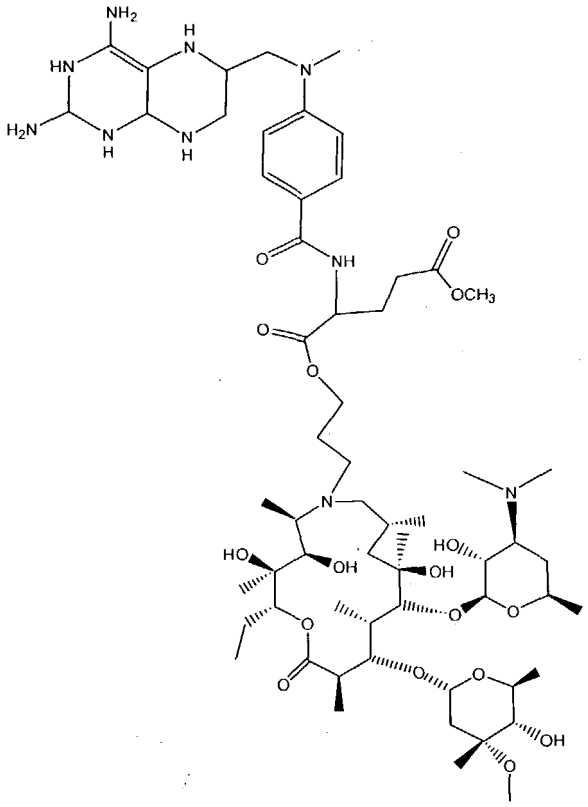
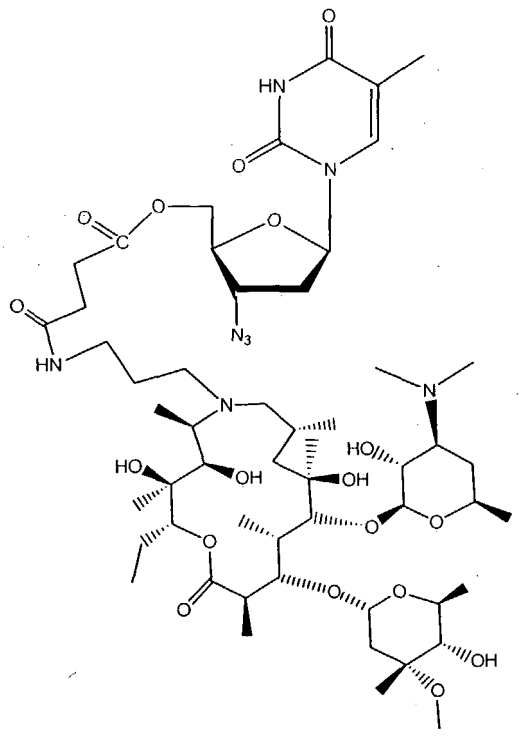


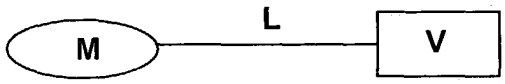
2

1 35. A compound of the Formula:



2

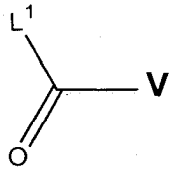
36. Process for the preparation of a compound of Formula **I**



I

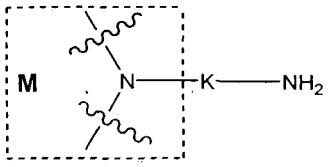
which comprises:

a) for a compound of Formula **I**, where X^2 is -NHC(O)-, by reacting a compound of Formula **VI**:



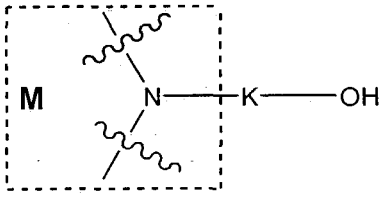
VI

wherein L^1 represents a leaving group, and a free amino group of a macrolide represented by Formula **VIIa**:



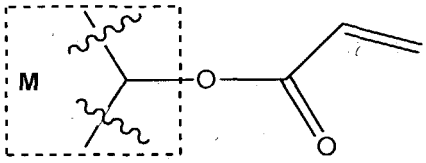
VIIa

b) for a compound of Formula **I**, where X^2 is -OC(O)-, by reacting a compound of Formula **VI** and the free hydroxyl group of a macrolide represented by Formula **VIIb**:



VIIb

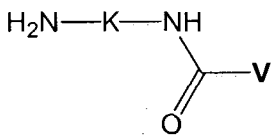
c) for a compound of Formula **I**, wherein X^1 is -OC(O)-, Q is -NH- and X^2 is -NHC(O)-, by reacting a macrolide represented by



Formula **VIIc**:

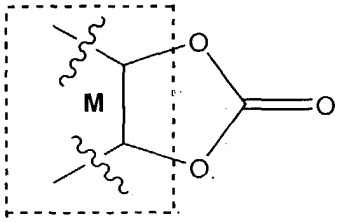
VIIc

and a a free amino group of the compound represented by Formula **VIb**:



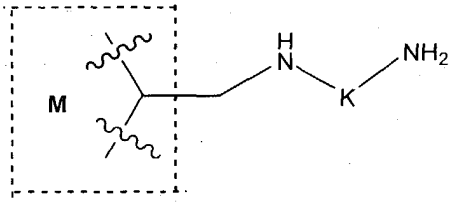
VIb

d) for a compound of Formula **I**, where X^1 is -OC(O)NH- and X^2 is -NHC(O)-, by reacting a macrolide represented by Formula **VIId** and free amino group of of the compound represented by Formula **VIb**:



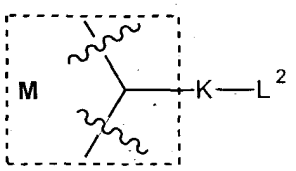
VIId

e) for a compound of Formula **I**, where X^1 is -CH_2-, Q is -NH- and X^2 is -NHC(O)-, by reacting a macrolide represented by Formula **VIIe** and a compound of Formula **VI**:

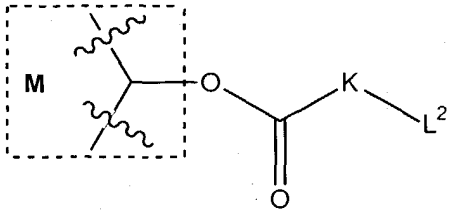


VIIe

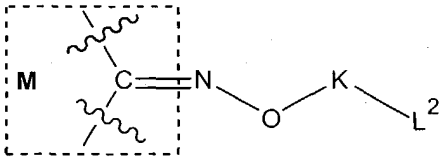
f) for any **L** compound of Formula **I** by reacting a macrolide represented by Formula **VIIf** or by Formula **VIIg** or by Formula **VIIh** having a leaving group L^2



VIIf

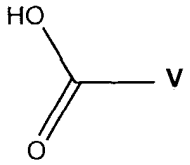


VIIg



VIIh

with a free carboxylic acid of a nonsteroid anti inflammatory subunit represented by the Formula **VIc**:



VIc

37. A pharmaceutical composition comprising a compound or a pharmaceutically acceptable salt or solvate of said compound according to claim 1 as well as a pharmaceutically acceptable diluent or carrier.

38. A method for the treatment of inflammatory diseases, disorders and conditions characterized by or associated with an undesirable inflammatory immune response, especially of diseases and conditions induced by or associated with an excessive secretion of TNF-α and IL-1 comprising administering to a subject afflicted with one of said disorders or conditions a compound according to claim 1.

39. A method of treating an inflammatory condition or a an immune or anaphylactic disorder associated with infiltration of leukocytes into inflamed tissue in a subject in need thereof which comprises administering to said subject a therapeutically effective amount of a compound represented by Formula **I** or a pharmaceutically acceptable salt or solvate thereof.

40. Method according to claim 39, wherein said condition or disorder is selected from the group consisting of asthma, adult respiratory distress syndrome, bronchitis, and cystic fibrosis.

41. A method according to claim 39, wherein said inflammatory condition or disorder is selected from the group consisting of inflammatory conditions or immune disorders of the lungs, joints, eyes, bowel, skin, and heart.

42. A method according to claim 39, wherein said inflammatory condition or disorder is selected from the group consisting of asthma, adult respiratory distress syndrome, bronchitis, cystic fibrosis, rheumatoid arthritis, rheumatoid spondylitis, osteoarthritis, gouty arthritis, uveitis, conjunctivitis, inflammatory bowel conditions, Crohn's disease, ulcerative colitis, distal proctitis, psoriasis, eczema, dermatitis, coronary infarct damage, chronic inflammation, endotoxin shock, and smooth muscle proliferation disorders.

43. A method for abating inflamation in an affected organ or tissue comprising delivering to said organ or tissue a therapeutically effective amount of a compound represented by Formula **I** or a pharmaceutically acceptable salt or solvate thereof.

44. A method for the treatment of viral diseases, disorders and conditions, comprising administering to a subject afflicted with one of said diseases or disorders an effective amount of a compound or a pharmaceutically acceptable salt or solvate thereof according to claim 1.

45. The method according to claim 44 wherein said viral disease is HIV.

46. A method for abating a sign or symptom or markers of a viral infection comprising administering to a subject presenting with said sign or symptom or marker a therapeutically effective amount of a compound according to claim 1.

47. A method for treating a symptom or sign or marker of viral infection, comprising administering to a subject presenting with said sign or symptom or marker a therapeutically effective amount of a compound according to claim 1.

48. The method according to claim 47 wherein said symptom or sign is selected from the group consisting of viral load, viral replication, viral activity, viremia, viral- specific antigens, viral RNA, viral DNA, reverse transcriptase activity, antiviral cytoxic cell activity in the subject, and T-cell or CD4+ cell count of the subject.

49. A method of treating a symptom or sign or marker of neoplasia comprising administering to a subject presenting with said symptom or sign a therapeutically effective amount of a compound according to claim 1.

50. The method according to claim 49 wherein said symptom or sign of neoplasia is selected from the group consisting of tumor burden, tumor size, afflicted organ weight, tumor recurrence, survival time, length or extent of subject remission, growth of cancer cells, cancer cell survival, apoptosis index, metatasis extent or metastasis rate, a biological marker associated with a particular type of neoplasia, proliferation markers, activation of relevant oncogenes dysregulation of tumor associated receptor function, tumor-specific antigens and tumor associated angiogensis.

51. A method of treating neoplasia comprising administering to a subject afflicted with neoplasia a therapeutically effective amount of a compound according to claim 1.

52. The compound according to claim 4 wherein said polypeptide is chosen from the group consisting of:

Gly-Phe-Leu, Gly-Gly-Phe, Gly-Phe-Phe, Gly-Phe-Gly, Gly-Leu-Gly, Gly-Val-Ala, Gly-Phe-Ala, Gly-Leu-Phe, Gly-Leu-Ala, Ala-Val-Ala, Gly-Gly-Phe-Leu, Gly-Phe-Leu-Gly, Gly-Phe-Ala-Leu, Ala-Leu-Ala-Leu, Gly-Phe-Phe-Leu, Gly-Leu-Leu-Gly, Gly-Phe-Tyr-Ala, Gly-Phe-Gly-Phe, Ala-Gly-Val-Phe, and Gly-Phe-Phe-Gly.